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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/618,865 | 07/14/2003 | Dharma Shukla | 03797.00610 | 6961 |
| 28319 7590 01/29/2007 BANNER & WITCOFF LTD., ATTORNEYS FOR CLIENT NOS. 003797 & 013797 1001 G STREET, N.W. SUITE 1100 WASHINGTON, DC 20001-4597 | | | EXAMINER ROCHE, TRENTON J | |
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| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/618,865

Applicant(s)

SHUKLA ET AL.

Examiner

Trenton J. Roche

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 9-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 29-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20030714.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is responsive to communications filed 8 November 2006 wherein Applicants elected Group I, claims 1-8 and 29-36 without traverse for further prosecution on the merits. The groups as outlined by the Examiner in paper number 10202006 are described below.
2. Claims 9-28 are currently withdrawn. Claims 1-8 and 29-36 have been examined.

Election/Restrictions

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-8 and 29-36, drawn to a method and apparatus for designing a process, including generating high level-code for a visual process, and transforming the high-level code into executable instructions via a compiler and an assembler, classified in class 717, subclass 109.
 - II. Claims 9-28, drawn to a method for constructing a process in a visual environment, through the steps of manipulating and positioning shapes corresponding to commands, classified in class 715, subclass 763.

The inventions are distinct, each from the other because of the following reasons:

4. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because Invention I is directed to the process of utilizing the visual model for the purposes of generating code which can

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be compiled and assembled into executable code. The subcombination has separate utility such as defining visual elements of the model and generating errors when elements of the model are not in accordance, and does require the steps of compiling and assembling code as outlined in Invention I.

The Examiner has required restriction between combination and subcombination inventions. Where Applicants elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicants are advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

5. Applicants' election without traverse of Group I, claims 1-8 and 29-36 in the reply filed 08 November 2006 is acknowledged.

Specification

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 34 and 35 refer to a "computer-readable medium," however, the specification describes on page 7 a "computer readable media." As such, the use of the term "computer-readable medium" lacks antecedent basis in specification, and it is recommended that either the claim or the specification be modified such that consistent terminology is used.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 29-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

10. The invention as disclosed in claims 29-35 is directed to non-statutory subject matter. The claimed invention as a whole must accomplish a practical application. That is, it must produce a “useful, concrete and **tangible** result.” (State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F.3d at 1373, 47 USPQ2d at 1601-02.)

7. Claim 29 is directed to “an apparatus” for designing a process, comprising various pieces of software: a visual designer, a compiler and an assembler. No physical aspects of the apparatus are disclosed however, and as such, the claim amounts to nothing more than computer program listings per se, in that the software are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and hardware elements of a computer which permit the computer program's functionality to be realized, and as such are considered functional descriptive material not capable of execution and thus are not capable of producing a useful, concrete and tangible result as required by the State Street Formulation. Claims 30-33, which are dependent on claim 29, do not cure the deficiencies of the independent base claim, as the claims do not set forth any physical aspects of the apparatus, and are thus rejected under the same rationale as claim 29.

8. Claim 34 is directed to a computer-readable medium having computer-executable modules. A computer readable medium having computer-executable modules would normally be considered

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statutory unless the specification defines computer readable medium as including intangible media such as signals, carrier waves, transmissions, optical waves, transmission media or other media incapable of being touched or perceived absent the tangible medium through which they are conveyed. The specification on pages 7 describes computer readable media as including "computer storage media and communication media...[c]ommunication media typically embodies computer readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism...communication media includes...wireless media such as acoustic, RF, infrared and other wireless media. Combinations of the [sic] any of the above should also be included within the scope of computer readable media." As such, the specification defines computer readable medium to include intangible media such as wireless signals and transmissions, and as such, is considered non-statutory matter. It is recommended that the claim be rewritten to recite "A computer-readable [media/medium] **storing** computer-executable modules..." thus emphasizing that the modules are stored on a tangible medium rather than an intangible medium such as wireless signals. Claim 35, which is dependent on claim 34, does not set forth any additional limitations which would cure the deficiencies of claim 34, and as such is rejected under the same rationale.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an

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application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-8, 29-36 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent

Application Publication 2002/0066074 A1 to Jabri.

Per claim 1:

Jabri discloses:

- designing a process with a visual display surface (“visual modeling tool is used to capture application logic...” in paragraph 0026)
- generating a high-level code emission for the process; the process being specified by a visual image on the visual display surface (“capturing a high-level structure (e.g., a process)...UML notation is used to capture a process in an activity diagram” in paragraph 0034)
- transforming the high-level code emission into computer-executable instructions (“execution engine 330 to invoke the application logic...[t]he execution engine 330 can be implemented in several ways including interpreted, just-in-time compiled, and compiled application logic” in paragraph 0038)

substantially as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Jabri discloses executing the computer-executable instructions as claimed (“executing application logic...” in paragraph 0039)

Per claim 3:

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The rejection of claim 1 is incorporated, and further, Jabri discloses business processes as claimed (“business applications...” in paragraph 0017)

Per claim 4:

The rejection of claim 2 is incorporated, and further, Jabri discloses execution on a plurality of computers as claimed (Note Figure 8, item 380 and the corresponding sections of the disclosure.)

Per claim 5:

The rejection of claim 4 is incorporated, and further, Jabri discloses the instructions being scalable as claimed (“taking into consideration the external client device 380 type...[t]he network server 310 will then respond...with the appropriately formatted response” in paragraph 0040)

Per claim 6:

The rejection of claim 2 is incorporated, and further, Jabri discloses obtaining the high-level code emission, and retrieving information about an infrastructure on which the computer-executable instructions are executed, and executing the instructions in accordance with the information as claimed (Note claims 1 and 5 and paragraph 0040. The server formats the response according to the external device type, or infrastructure, that the instructions are to be executed on.)

Per claim 7:

The rejection of claim 6 is incorporated, and further, Jabri discloses the instructions being transport agnostic as claimed (“will use a client device management subsystem 320 for converting the response object to the appropriate format” in paragraph 0040)

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Per claim 8:

The rejection of claim 1 is incorporated, and further, Jabri discloses compiling and assembling the code into computer-executable instructions as claimed (Note the rejection regarding claim 1. An assembler is used to execute the instructions from the compiled code.)

Per claim 29:

Note the rejection regarding claims 1 and 8.

Per claim 30:

The rejection of claim 29 is incorporated, and further, note the rejection regarding claim 6.

Per claims 31 and 32:

The rejection of claim 30 is incorporated, and further, Jabri discloses the execution engine being remotely located and co-located from the visual designer as claimed (“a visual modeling or assembly tool is used to capture application logic...and to deploy it onto an execution platform dynamically.” in paragraph 0005. The visual modeling system and the execution platform are separate from each other, but they are tied by a network, and as such, are co-located on the same network.)

Per claim 33:

The rejection of claim 29 is incorporated, and further, Jabri discloses an input module receiving a command from a user, a high-level semantics module, a visual language logic module determining whether a command is consistent with semantics of the process, and a display module displaying a

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visual image to a user and updates the visual image in accordance with the command as claimed (Note at least Figure 6 and paragraph 0033, which states that inheritance relationships may be required between certain objects. Thus the visual designer would require that the object be consistent with the semantics of the process by requiring certain relationships and behaviors. Finally, when the user places the objects on the screen, the visual image would be updated as shown in Figure 7.)

Per claim 34:

Note the rejection regarding claim 33.

Per claim 35:

The rejection of claim 34 is incorporated, and further, Jabri discloses providing an indication to the user if the command is not consistent with the semantics as claimed (Note Figure 7 and the corresponding sections of the disclosure. The visual model provides indication of relationships between objects, and the user can check to ensure correct semantics.)

Per claim 36:

Note the rejection regarding claims 1-3 and 34.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trenton J. Roche whose telephone number is (571) 272-3733. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Trenton J Roche
Examiner
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TJR


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SUPERVISORY PATENT EXAMINER